adoption of the report by the House of Representatives and the signing of the bill by the President being a foregone conclusion. That bill contains an amendment (based upon the so-called McRae Bill, the measure advocated by the American Forestry Assocation) under which the Secretary of the Interior is authorized to institute a forestry service for the forest reservations which had been established prior to the late proclamations by President Cleveland and such as may be made hereafter. These latter reservations, made upon the recommendation of the Committee of the National Academy of Sciences, have by this amendment been suspended, *i. e.*, the operation of the proclamations has been annulled until March 1, 1898, and until that time the lands embraced in these reservations are to be returned to the public lands open to entry and subject to the general land laws.

A survey of all the reservations, showing the distribution of the forests, by the Geological Survey is ordered and an appropriation of $150,000 made for it, the supposition being, although not definitely expressed in the bill, that such surveys or sufficient portions of them can be accomplished before March 1, 1898, and give information as to existing conditions which will enable the President to entirely revoke or else intelligently modify the boundaries and extent of the reservations, power to do so being expressly given in the bill.

This entire legislation is, to be sure, a compromise measure and extremely crude and imperfect, having been precipitated by the strenuous opposition of the Western delegates to the reservations made by Mr. Cleveland's order. These, it is claimed, have been established hastily, without sufficient knowledge and discrimination, without opportunity for interested parties to be heard, embodying, at least in some cases, large areas that should not reasonably have been included. To the last the Western representatives acted as a unit in discrediting in every way the hasty action of President Cleveland and his advisors, and in insisting that the proclamations be unconditionally and forever annulled.

In spite of the crudities and the emasculated condition of the legislation which finally saved the reservation policy and secures the first beginnings of a forestry service, it must be welcomed as such a first step, which may gradually be developed into a creditable forest administration. Thus, while it appeared a misfortune that the Committee of the National Academy advocated the extension of forest reservations before having submitted their report on the necessary administration of the same, it may have proved a blessing in disguise.

There is no specific appropriation with which to inaugurate the forestry service, unless the $90,000 appropriated for Special Timber Agents is construed to be applicable.

The manner in which the Geological Survey will acquit itself of its difficult task of segregating the lands which are properly to be reserved or excluded from reservations which will have to do with allaying the opposition of the Western States and forwarding the establishment of a sound forest policy.

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CURRENT NOTES ON PHYSIOGRAPHY.

TOPOGRAPHICAL MAPS OF THE GEOLOGICAL SURVEY.

BY recent Congressional enactment, the topographic as well as the geologic maps and atlases of the U. S. Geological Survey may be sold to the public. Heretofore the distribution of the topographic sheets has been somewhat irregular; and, although a few years ago the statement was authorized that copies of the maps would be distributed to schools for use in teaching geography

as long as the printed editions lasted, this proved an insufficient means of placing them in the hands of the public. They are now sold at five cents apiece for small orders, or at two cents each in orders of a hundred sheets or more, whether for the same or for different sheets. Two dollars for a hundred maps is certainly a merely nominal price. Nine hundred sheets have been printed. Lists of the maps may be had on application to the Director of the Survey. Orders for sheets must be accompanied by money order or cash for the exact sum called for.

Among the newer sheets may be mentioned Lexington and Stromsburg, Nebraska, including parts of Platte river sprawling on in tangled channels its sandy bed, with dissected uplands on either side of its broad valley floor; Pasadena, Cal., showing what appears to be a great alluvial fan spreading out from the base of the San Gabriel mountains; Chester, Pa., with a number of sub-parallel, transverse streams draining the 'stripped belt' of old-land marginal to the New Jersey coastal plain, as if they had been set on the old-land rocks by superposition when the plain stretched further inland. Many others are of equal interest. The San Mateo, Cal., sheet (part of the San Francisco peninsula) is notable for the delicacy of its contour lines, which appear to show much more detail than usual and in this respect stand in strong contrast with the free-hand contours on the earlier Fort McKavett, Texas, sheet. The same is true of the contrast beween the irregular contours on the Pueblo, Col., sheet, edition of 1896, and the over-generalized contours of the same sheet, edition of 1891.

THE BARABOO DISTRICT, WISCONSIN.

"The drift phenomena in the vicinity of Devil's Lake and Baraboo, Wisconsin," (*Chicago Journ. Geol.*, V., 1897, 130–147) is a paper based on field work by students of the University of Chicago, under the direction of Professor Salisbury. The region is one of varied attractions, including the Baraboo ridge, an ancient quartzite monadnock on the peneplain of pre-Cambrian North America, submerged and buried in early paleozoic sediments, now exposed again by weathering and denudation, and thus, like other ancient fossil forms, organic or inorganic, presented to us for study. The ridge is irregularly traversed by the terminal moraine of the Green Bay glacial lobe, and the irregular path of the limiting drift ridge is the subject of special study. Devil's Lake lies in a deep gorge, excavated in preglacial time (probably for the most part, Tertiary) across the quartzite ridge; the agent of excavation being apparently the Wisconsin River, now displaced by heavy moraines in the gorge. The quartzite ridge was somewhat sculptured in pre-Cambrian times, for its slopes still hold a sandstone filling in ancient ravines; but we question whether the gorge was so largely of ancient origin as is implied (p. 141). The greater part of its walls are free from sandstone; and, moreover, it would be altogether unlikely that an ancient gorge, refilled during burial, should have been again discovered and occupied by a superposed river.

BALCH, ON ICE CAVES.

E. S. Balch, lately President of the Geographical Society of Philadelphia, has for some years made a special study of ice caves, and now presents a summary of his observations and researches (Ice caves and the causes of subterranean ice, Journ. Franklin Inst., Philadelphia, March, 1897). The popular belief that ice forms in these caves only in summer is combatted. This idea seems to be based on the fact that in summer the air of a cave feels cool, while in winter it feels warm; but this is only by

way of contrast with the external air, and not at all indicative of actual temperatures. Caves are coldest in winter, but if no water then enters, the formation of ice is delayed until milder weather outside thaws the surface ice or snow. The fact that ice caves are unknown in regions where the ordinary winter temperatures is not below freezing is taken to prove that their true cause is the most manifest one, and that the ice is not due to reduction of temperature by evaporation, and especially that it has nothing whatever to do with a lingering of the glacial period underground. Further details are promised in a later publication.

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CURRENT NOTES ON ANTHROPOLOGY.

ETHNOGRAPHY OF MADAGASCAR.

Two interesting articles on the above subject may be compared, with special reference to the ethnic position of the Hovas.

The one is by Mr. W. L. H. Duckworth and appears in the *Journal Anthropological Institute*, February, 1897, on some skulls from Madagascar in the Museum of Cambridge University. His conclusion from his very careful measurements is that the Hova skull finds its counterpart in the Borneo, therefore Malay type, while those from the Betsileo and Betsimisaraka tribes have marked African traits.

This is in accordance with the general opinion that the Hovas are of Malayan origin. Yet Professor Letourneau, in the Bulletin of the Paris Anthropological Society, throws overboard all the evidence, linguistic and physical, which attaches the Hovas to the Malayan stock, and claims them as purely African, along with the other natives of the island. His arguments are too hasty to carry conviction, and it cannot be said that he has seriously shaken the prevailing opinion.

STUDIES IN MAYAN HIEROGLYPHS.

Two short but valuable articles have recently been published by Dr. Förstemann; the one, the sixth number of his series 'Zur Entzifferung der Mayahandschriften;' the other a paper in *Globus*, Bd. LXXI., No. 5. The latter takes up eight glyphs, and sets forth their relations in the Dresden Codex, and suggests what they mean, or, what they *cannot* mean, for the logical process of exclusion is here of great use.

In the former article he examines the passage of the Dresden Codex which covers the upper thirds of pages 31 and 32. There is evidence, which he mentions, that to the writer of the Codex this was an important paragraph. It deals with large numbers, and not with past or present, but future time. It can, therefore, be nothing else than a prophecy or forecast. What was connected with such a calculation can now be only surmised, as this portion of the literature was transmitted orally. Incidentally (p. 4) it is shown that the calculations of the Dresden Codex date from an epoch anterior to those found on the latest sculptures of Copan.

PSYCHICS IN THE STUDY OF MAN.

NOTHING could be more proper than to include in an anthropological library the 'Proceedings of the Society for Psychical Research,' although it has a queer repute for ghost hunting, etc. The address of its President, William Crookes, F.R.S., is a pamphlet well worth reading and thinking about by the most physical anthropologist. It is a study of the effects of environment on man, considering how the world would look to him if he was the size of a mite, or, on the other hand, as tall as a tree; how he could be influenced by an increase or decrease in the power of gravity, and what might happen to him if he could manage to perceive the millions of vibrations which